# Educational and gender inequalities in income trajectories: The role of educational disparities in family life courses?

Juho Härkönen, Department of Political and Social Sciences, European University Institute Misun Lim, Max Weber Programme, European University Institute

## Abstract

Educational differences in family trajectories—in which trajectories characterized by family instability are increasingly followed by the less educated—have gained much attention in family demography and stratification research. Family demographic differences by education have the potential to strengthen social inequality by education and by gender, both within and across life courses, but thus far research that has explicitly analyzed the inequality enforcing effects of these family demographic patterns are few. We asked whether differences in family trajectories by education among White American women and men shape educational and gender inequalities in income over the life course using data from the National Longitudinal Study of Youth 1979. We will estimate educational differences in the (hazard) rates of experiencing various family formation and dissolution events as well panel regression models of the effects of these events on income. Finally, we will combine these estimates to simulate income trajectories assuming that all educational groups follow the family demographic life courses of the college educated. We will use results from these simulations to assess whether—and how much—educational differences in family life courses contribute to inequalities in life course patterns in income.

## **Extended abstract: Background**

Much social demographic research has in the recent decades focused on educationally uneven change in family structures and dynamics, named by McLanahan (2004) as "diverging destinies". This development—in which potentially disadvantageous family trajectories characterized by family instability are increasingly followed by the less educated—has been documented in several countries, and is particularly clear in the United States (McLanahan 2004; McLanahan and Jacobsen 2015). Educational differences in family trajectories have the potential to strengthen existing life course and intergenerational social inequalities by education, but can also modify inequalities by gender (McLanahan and Percheski 2008).

Despite the attention to educational differences in family demography, relatively few studies have explicitly analyzed whether and how much they affect inequality. Bernardi and Boertien (2017) concluded that little of the inequality in educational attainment by parental education could be attributed to differences in growing up in single parent households, partly because the effects of the latter varied across parental education. In a similar vein, Härkönen (2017) reported cross-national differences in how much single motherhood contributed to educational differences in child poverty, depending on how strongly single motherhood predicted child poverty in each country (see also Cohen 2015). Turning to poverty risks over the adult life course, Hogendoorn, Leopold and Bol (2018) found that educational differences in divorce widened life course poverty risks by education in the Netherlands both because divorce was more common among the lower educated and because divorce was a higher poverty risk factor among them.

We contribute to this growing field of research by analyzing how educational differences in family trajectories shape educational and gender differences in wage and family income trajectories over the adult life course among White Americans. As mentioned above, the link between education and family demography is strong in the United States: the low educated are

less likely to marry (Goldstein and Kenney 2001), more likely to have children outside marriage (McLanahan 2004), and more likely to separate and divorce (Martin 2006) than those with college education. Because family events—such as childbearing or divorce (DiPrete and McManus 2000)— have effects on income, differences in their incidence can shape inequality in income and its trajectories; their inequality impact may furthermore depend on differences in the associated income penalties. Furthermore, the effects of these events vary by gender, implying that educational differences in family demography can shape inequalities by gender and its intersection with education.

### Data and analysis

We use the National Longitudinal Study of Youth 1979 cohort. Our primary outcome variables are annual earnings and annual household income, and our primary independent variables are education and family status (measured as combinations of parental and marital status).

Our analytical strategy is the following. First, we describe men's and women's labor income trajectories over the life course. Second, we estimate the (hazard) rates of experiencing the following family events by education: entry into cohabitation, entry into marriage, non-partnered childbearing, childbearing within cohabitation, marital childbearing, and divorce and separation. Third, we use fixed effects regressions to estimate the effects of these family events—with interactions with education—on incomes. Fourth, we bring the second and third parts together and use the estimates to simulate (counterfactual) income trajectories when assuming that all educational groups a) follow the family trajectories of the college educated, b) experience the same effects of family events of the college educated. A comparison of these standardized income trajectories to the actual ones in each educational group can be used to assess whether and how educational differences in family demography shapes income trajectories.

#### **Preliminary results**

Thus far, we can present preliminary results from the fixed-effects regression analysis of annual earnings. Table 1 shows the effects of combinations of marital/partnership status and childbearing on the logged annual earnings of White women and men, separately for all women and men, and broken down by college education.

Family Structure	Women			Men		
	All	College	Less	All	College	Less
Single childless	0	0	0	0	0	0
Cohabiting childless	-0.059	0.157	-0.131	0.277***	-0.013	0.328***
Married childless	-0.342***	-0.255**	-0.405***	0.099*	0.113	0.093
Divorced childless	-0.035	0.007	-0.063	0.068	0.014	0.074
Single parent	-0.866***	-0.931*	-0.903***	0.077	0.259	0.079
Cohabiting parent	-1.042***	-0.747*	-1.096***	0.146	-0.151	0.154
Married parent	-1.078***	-1.199***	-1.093***	0.251***	0.167	0.236***
Divorced parent	-0.653***	-0.539**	-0.715***	0.070	0.232	0.062

Table 1.

Note: The models control for education (all women and men), experience and seniority, hours, and region. \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

We find that women's earnings are negatively affected by being married (more so for the noncollege educated) and by parenthood. The effects of parenthood depend on marital status and education: the effects of being a cohabiting mother are stronger among those with less than a college degree than among college graduates, whereas the effects of marriage are slightly stronger among the college educated. Divorced mothers, likewise, experience an earnings penalty when compared to childless singles, but the penalty is smaller than for married or cohabiting parents, and smaller among college graduates than among mothers without a college degree.

Men, on the other hand, experience a cohabitation premium, a smaller marriage premium (significant for all men), and a premium for being a married father. The stronger cohabitation rather than marital premium can reflect the now-common sequencing on these transitions, and are not very different from results on logged wages presented by Killewald and Gough (2013). Both the cohabitation and married father premiums are stronger for men with less than a college degree.

### Preliminary hypotheses and next steps

Our preliminary findings suggest that the role of differences in family trajectories on educational inequalities in income trajectories is not straightforward. Educated women are more likely to get married, stay married, and have children in marriage than less educated women who are more likely to have children outside marriage and experience family instability. Stable married family life may have many advantages, but decreases women's annual earnings, and educational differences in it may *reduce* earnings inequalities among women. At the same time, stable married family life can boost men's earnings, *increasing* inequalities among men. Finally, the gender difference suggests that educational differences in family trajectories can shape inequalities in the intersection of gender and education.

We will assess these expectations with the strategy outlined above. We will also use annual household incomes, which give a better indication of inequalities in living standards (household incomes in NLSY are not as ready-to-use as individual incomes; thus we could not present these findings yet).

### References

- Bernardi, F., & Boertien, D. (2017). Non-intact families and diverging educational destinies: A decomposition analysis for Germany, Italy, the United Kingdom and the United States. *Social Science Research*, *63*, 181–191.
- Cohen, P. N. (2015). Divergent responses to family inequality. In P. R. Amato, A. Booth, S. M. McHale, & J. Van Hook (Eds.) *Families in an era of increasing inequality* (pp. 25–33). New York (NY): Springer.
- DiPrete, T. A. & McManus, P. A. (2000). Family change, employment transitions, and the welfare state: Household income dynamics in the United States and Germany. *American Sociological Review*, 65, 343-370.
- Goldstein, J. R. & Kenney, C. T. (2001). Marriage delayed or marriage foregone? New cohort forecasts of first marriage for U.S. women. *American Sociological Review*, 66, 506-19.
- Hogendoorn, B., Leopold, T., & Bol, T. (2018). Divorce and the growth of poverty gaps over the life course: A risk and vulnerability approach. DIAL Working paper 02/2018.
- Härkönen, J. (2017). Diverging destinies in international perspective: Education, single motherhood, and child poverty. LIS Working Paper No. 713.
- Killewald, A. & Gough, M. (2013). Does specialization explain marriage penalties and premiums? *American Sociological Review*, 78, 477-502.
- Martin, S. P. (2006). Trends in marital dissolution by women's education in the United States. *Demographic Research*, *15*, 537–560.

- McLanahan, S. S. (2004). Diverging destinies: How children are faring under the second demographic transition. *Demography*, *41* (4), 607–627.
- McLanahan, S. S., & Jacobsen, W. (2015). Diverging destinies revisited. In P. R. Amato, A. Booth, S. M. McHale, & J. Van Hook (Eds.) *Families in an era of increasing inequality* (pp. 3–23). New York (NY): Springer.
- McLanahan, S. S., & Percheski, C. (2008). Family structure and the reproduction of inequalities. *Annual Review of Sociology*, *34*, 257–276.